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Hospital Employee Performance Analysis Based on Quality, Quantity, Timeliness, and Work Effectiveness Dimensions: A Case Study

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ABSTRACT

Optimal performance reflects individual effectiveness in task execution and directly contributes to the quality of services provided. This study aims to analyze how quality of work, quantity of output, timeliness, and work effectiveness influence employee performance at Griya Waluya Hospital Ponorogo in 2024. A quantitative correlational method was used, focusing on collecting and analyzing numerical data to determine the relationships between variables. The population includes all employees of the hospital 400 individuals, with 80 participants selected using quota sampling. Data were obtained through questionnaires, direct observations, and document analysis. Multiple linear regression analysis was conducted using SPSS software. The findings reveal that all examined dimensions work quality, workload, punctuality, and work efficiency significantly impact overall employee performance. These results suggest that improvements in each dimension can enhance staff performance outcomes. Therefore, hospital management is encouraged to continuously monitor and strengthen these aspects through targeted training, performance evaluations, and development programs aligned with key performance indicators (KPIs). This study contributes to performance management practices by emphasizing the importance of a balanced focus on various performance dimensions in health service institutions.

KEYWORDS:

Quality Of Work, Quantity Of Work, Timeliness, Work Effectiveness, Employee Performance

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INTRODUCTION

The development of globalization and advances in information technology have driven a growing demand for human resources who are not only technically competent but also excel in productivity and work effectiveness. In organizational contexts, particularly in public service sectors such as hospitals, employee performance plays a vital role in achieving institutional goals. Optimal performance reflects individual effectiveness in task execution and directly contributes to the quality of services provided. According to Wulandari et al. (2023), employee performance is a key benchmark for institutional success, especially in the healthcare sector, where speed, precision, and accuracy are essential.

Employee performance can be defined as the outcome of carrying out duties in accordance with organizational standards. Nuraini et al. (2022) emphasize that performance includes both the results achieved and the process of task execution. Asmini et al. (2022) highlight the influence of skill, experience, dedication, and time use, while Sinaga and Sihombing (2021) classify performance into three main dimensions: quality, quantity, and timeliness. These three aspects are frequently used

in evaluating the effectiveness and productivity of employees in structured work environments.

Work quality refers to the level of accuracy, attention to detail, and consistency in meeting work standards. Indriyatni (2011) sees quality as how far output meets technical and aesthetic criteria. Halim and Paramarta (2024) note that competence, technical ability, and motivation are crucial to ensuring high-quality performance. Furthermore, adaptability and commitment to continuous improvement, as stated by Salsabila et al. (2025), are essential components that reinforce quality in dynamic service settings.

Work quantity concerns the volume of output delivered within a specific period. Wiguna (2017) measures it by the amount of service or product produced, whereas Robinson et al. (n.d.) warn that volume must be balanced with quality to avoid sacrificing standards for speed. This dimension highlights how well human resources are utilized in meeting institutional targets. Similarly, timeliness in task completion is another crucial dimension. Sutoro and Darmadi (2024) argue that timeliness enhances operational efficiency, while Agustiawan et al. (2023) warn that delays in healthcare settings can endanger patient safety and service quality.

Work effectiveness reflects the extent to which employees utilize available resources efficiently to achieve optimal outcomes and support the organization's long-term goals. Sumiarthini and Yudharta (2024) explain that effectiveness is closely related to adaptability and problem-solving capacity. Rahman et al. (2017) highlight the importance of balancing efficiency and final outcomes. In the hospital setting, Arifin et al. (n.d.) stress that effectiveness must also consider the safety of patients and the smooth flow of healthcare services. Thus, the integration of quality, quantity, timeliness, and effectiveness forms a comprehensive measure of employee performance.

Griya Waluya Hospital Ponorogo is a private healthcare facility that serves a substantial number of patients between 200 and 300 daily. The hospital's ability to maintain service quality heavily depends on its staff's performance. However, preliminary observations revealed issues such as employee tardiness, ineffective communication, and delays in completing medical administration tasks. For instance, medical record entry delays of up to two days indicate reduced work efficiency and discipline. These findings highlight the urgency for a systematic performance evaluation based on the aforementioned dimensions.

Previous research has explored various factors affecting employee performance, including motivation, discipline, and leadership (Candana, 2021; Hustia, 2020; Gunadi et al., 2020). Nevertheless, limited studies specifically investigate employee performance in mid-scale hospitals using an integrated analysis of the four key indicators—

quality, quantity, timeliness, and effectiveness. This study seeks to fill that gap by providing a comprehensive theoretical and practical contribution.

Furthermore, the relationships among the four key dimensions of employee performance have been discussed in several studies, offering valuable insight into how one dimension may influence another. First, employee performance quality has been shown to affect work quantity. Competent and meticulous employees tend to complete more tasks efficiently. Ullah et al. (2021) and Karida et al. (2024) demonstrated that high work quality directly contributes to increased work output, especially in the healthcare sector, where both accuracy and efficiency are vital. Based on this, the study proposes the first hypothesis:

H1 – Work quality has a positive effect on work quantity.

In addition, quality performance is also closely related to timeliness. Employees with strong quality traits, such as attention to detail and responsibility, tend to manage their time better and are more likely to meet deadlines. Ulum et al. (2020) and Septian (2023) argue that high-quality performance enhances accuracy and on-time task completion. This leads to the second hypothesis:

H2 – Work quality has a positive effect on timeliness of performance.

Moreover, the relationship between work quantity and work effectiveness is also significant. A high volume of completed tasks, when maintained without sacrificing quality, indicates effective use of resources and time. Basri and Arsal (2022) and Yuliana and Rustendi (2024) assert that high productivity improves operational efficiency and contributes to organizational effectiveness, especially in hospital environments. Thus, the third hypothesis is proposed:

H3 – Work quantity has a positive effect on work effectiveness.

Finally, timeliness of performance plays a crucial role in shaping overall effectiveness. Timely completion of tasks ensures process efficiency and organizational coordination. Studies by Budo et al. (2020) and Muktamar et al. (2024) found that timely performance improves workflow coordination and supports organizational stability. Therefore, the fourth hypothesis is stated as follows:

H4 – Timeliness of performance has a positive effect on work effectiveness.

In line with the literature and identified problems, this study aims to describe and analyze the performance of employees at Griya Waluya Hospital Ponorogo in 2024 based on the dimensions of work quality, work quantity, timeliness, and effectiveness. The study addresses the following problems: how work quality is manifested in employee tasks, to what extent the quantity of work meets service demands, how well timeliness is

maintained in fulfilling responsibilities, and how work effectiveness supports the hospital's overall goals.

METHODS

This study employed a quantitative approach with a correlational design aimed at investigating the relationships among various aspects of employee performance, including quality of task execution, workload volume, timeliness, and work effectiveness, in shaping the overall performance of employees at Griya Waluya Hospital Ponorogo in 2024. The quantitative approach was selected because it emphasizes numeric data collection and statistical analysis to objectively and measurably explore the influence between observed variables.

The research was conducted at Griya Waluya Hospital Ponorogo, located on Jalan Sultan Agung No. 68, Ponorogo Regency, East Java Province, over a six-month period from January to June 2025. The procedure involved several stages: in the first month, the research design and measurement instruments were developed and tested through a pilot questionnaire. In the second and third months, data were collected through the distribution of questionnaires, direct field observations, and documentation review.

Data processing and analysis were carried out during the fourth- and fifth-months using SPSS software with multiple linear regression methods. In the final month, the research findings were compiled into a report and presented to the hospital management as a form of academic accountability.

The population of this study included all employees of Griya Waluya Hospital Ponorogo, totaling 400 individuals. The sample was determined using the Slovin formula with a 10% margin of error, resulting in a minimum of 80 participants. The sampling technique used was quota sampling, allowing researchers to set the number of respondents according to certain characteristics until the desired quota was met.

The variables analyzed in this study included four independent variables: quality of work execution (X1), volume of work activities (X2), timeliness (X3), and work effectiveness (X4). The dependent variable was overall employee performance (Y). Each variable was defined operationally and measured using an ordinal scale questionnaire. The degree of tendency (high or low) for each variable was determined based on the mean value.

The primary data collection instrument was a structured questionnaire developed based on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). To enhance data validity, direct observation and document analysis were also employed. Observation served to record actual behaviors and performance dynamics in the work environment, while documentation was used to examine secondary data such as employee

performance reports, attendance records, and administrative hospital documents.

An operational framework was constructed to systematically outline the relationships between variables and the measurement techniques applied, ensuring clarity and consistency throughout the research process.

The data processing began with univariate analysis to present frequency distributions and response tendencies for each variable, Sugiyono, 2019. This was followed by reliability and validity testing of the instruments to ensure consistent and accurate measurement. Classical assumption tests including data normality, multicollinearity, and homoscedasticity were also conducted to determine the appropriateness of applying multiple linear regression.

The main analysis was performed using multiple linear regression to examine both simultaneous and partial effects of the independent variables on the dependent variable. Hypotheses were tested based on statistical significance (p-values) and the coefficient of determination (R^2), which assessed how much of the variance in employee performance was explained by the predictors. In addition, goodness-of-fit indicators—including the overall F-statistic, model significance, and the adjusted R^2 value were examined to confirm that the regression model provided an adequate and reliable fit to the data.

Through a structured methodological foundation and a systematic analytical approach, this study aims to contribute empirical insights into optimizing human resource performance in healthcare institutions, particularly within the operational context of Griya Waluya Hospital Ponorogo.

RESULT AND DISCUSSION

Results

1. Validity Test

Based on the validity test results presented in Table 1, all statement items under the variables of Quality of Performance (X1), Quantity of Performance (X2), Timeliness (X3), Effectiveness (X4), and Employee Performance (Y) exhibit correlation coefficients (r-calculated) greater than the critical r-table value (0.219). Hence, all research instruments are deemed valid and suitable for further data analysis.

Table 1. Validity Test

No.	Variable	Statement Code	r Calculated	r Table	Remarks
1	Quality of Performance (X1)	X1_1	0.652	0.219	valid
		X1_2	0.634	0.219	valid
		X1_3	0.601	0.219	valid
		X1_4	0.680	0.219	valid
2	Quality of Performance (X2)	X2_1	0.558	0.219	valid
		X2_2	0.603	0.219	valid
		X2_3	0.621	0.219	valid
		X2_4	0.590	0.219	valid
3	Timeliness (X3)	X3_1	0.564	0.219	valid
		X3_2	0.580	0.219	valid
		X3_3	0.597	0.219	valid
		X3_4	0.610	0.219	valid
4	Effectiveness (X4)	X4_1	0.670	0.219	valid
		X4_2	0.655	0.219	valid
		X4_3	0.641	0.219	valid
		X4_4	0.628	0.219	valid
5	Employee Performance (Y)	Y_1	0.695	0.219	valid
		Y_2	0.674	0.219	valid
		Y_3	0.689	0.219	valid
		Y_4	0.702	0.219	valid

(Source: Author, 2025)

2. Reliability Test

As shown in Table 2, each variable yields a Cronbach's Alpha coefficient exceeding 0.7, which confirms that the instruments possess high internal consistency and are therefore considered reliable.

Table 2. Reliability Test

Variable	Cronbach 's Alpha	Remarks
Quality of Performance (X1)	0.851	Reliable
Quality of Performance (X2)	0.845	Reliable
Timeliness (X3)	0.832	Reliable
Effectiveness (X4)	0.876	Reliable
Employee Performance (Y)	0.890	Reliable

(Source: Author, 2025)

3. Classical Assumption Test

a. Normality Test

As presented in Figure 1, the Kolmogorov–Smirnov significance values for all variables are greater than 0.05. This indicates that the data are normally distributed, fulfilling the assumption of normality.

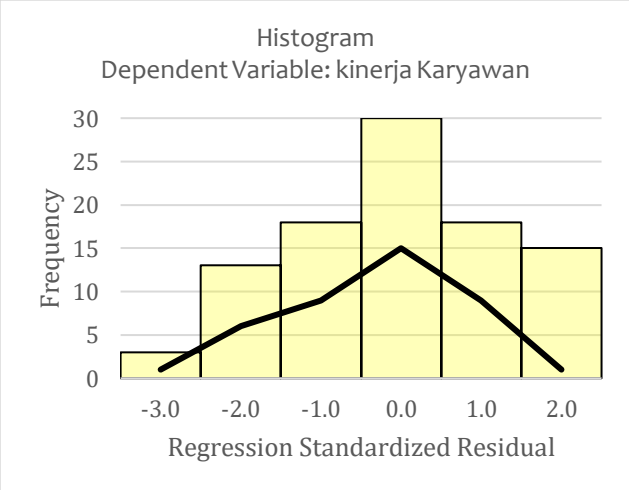

Figure 3. Normality Test
(Source: Author, 2025)

b. Multicollinearity Test

Table 3 displays Tolerance values above 0.1 and VIF values below 10 for all independent variables. These results suggest that there is no indication of multicollinearity among the predictors in the regression model.

Table 3. Multicollinearity Test

Variable	Tolerance	VIF (Variance Inflantion Factor)
Performance Quality (X1)	0.814	1.228
Work Quantity (X2)	0.752	1.331
Timeliness (X3)	0.825	1.212
Work Effectiveness(X4)	0.787	1.270

(Source: Author, 2025)

c. Heteroscedasticity Test

According to Table 4, the Glejser test reveals that two variables (X1 and X3) have significance values below 0.05, indicating potential signs of heteroscedasticity. However, variables X2 and X4 show significance values above 0.05, suggesting the absence of heteroscedasticity in those dimensions.

Table 4. Heteroscedasticity Test

Variable	Regression Coefficient	Std. Error	t	Sig.
Quality of Performance (X1)	0.105	0.045	2.333	0.021
Quantity of Performance (X2)	0.070	0.042	-1.667	0.099
Timeliness (X3)	0.090	0.040	2.250	0.027
Work Effectiveness(X4)	-0.045	0.038	-1.184	0.0238

(Source: Author, 2025)

4. Multiple Linear Regression Analysis

a. Model Summary

Table 5 shows an Adjusted R Square value of 0.641, meaning that 64.1% of the variability in employee performance can be explained by the combined influence of the independent variables: quality, quantity, timeliness, and effectiveness of performance.

Table 5. Model Summary

Model	R	Adjusted R Square	Std. Error of the Estimate
1	0.812	0.659	3.218

(Source: Author, 2025)

b. F Test

The ANOVA results in Table 6 indicate a significance level of 0.000, which is less than 0.05. This means that the regression model is statistically significant overall in predicting the dependent variable.

Table 6. F Test

Model	Sum of Squares	df	f	Sig.
Regression	1520.408	4	36.744	0.000
Residual	788.592	75		
Total	2309.000	79		

(Source: Author, 2025)

c. t Test

The t-test results in Table 7 show that all independent variables have significance values below 0.05, indicating that they each have a significant partial effect on employee performance. The highest beta coefficient is found in the Quality of Performance variable (β = 0.299), followed by Timeliness (β = 0.278), Quantity (β = 0.224), and Effectiveness (β = 0.198).

Table 7. t Test

Model	Unstandardized Coefficients B	Std. Error	Stantardized coefficients Beta	t	Sig.
(Constanct)	12.347	2.147	-	5.752	0.000
X1	0.315	0.084	0.299	3.750	0.000
X2	0.247	0.091	0.224	2.714	0.008
X3	0.289	0.087	0.278	3.322	0.001
X4	0.205	0.079	0.198	2.595	0.011

(Source: Author, 2025)

DISCUSSION

1. The Influence of Performance Quality on Employee Performance

The regression analysis reveals that Quality of Performance (X1) has a significant effect on employee performance (sig. = 0.000; β = 0.299). This implies that higher quality in task execution, including accuracy, precision, and diligence, contributes substantially to overall employee performance. This finding aligns with Ullah et al. (2021) and Karida et al. (2024), who found that high performance quality positively affects work output, especially in service-based sectors like healthcare.

2. The Influence of Performance Quantity on Employee Performance

The Quantity of Performance (X2) variable also significantly affects employee performance (sig. = 0.008; β = 0.224). This

result suggests that the higher the number of tasks completed within a certain timeframe, the better the employee's performance. This is consistent with the studies by Basri & Arsal (2022) and Yuliana & Rustendi (2024), which emphasize that higher work output enhances operational efficiency in hospital environments.

3. The Influence of Timeliness on Employee Performance

   Timeliness (X3) significantly influences performance (sig. = 0.001; β = 0.278), indicating that the ability to manage time and complete work on schedule is critical for enhancing employee output. This finding is supported by Budo et al. (2020) and Muktamar et al. (2024), who affirm that punctuality plays a key role in improving coordination and workflow in hospitals.

4. The Influence of Effectiveness on Employee Performance

   The variable Effectiveness (X4) also shows a significant impact on employee performance (sig. = 0.011; β = 0.198). Effectiveness refers to the optimal use of resources to achieve goals. This finding aligns with Handayani & Yusuf (2018) and Yuliana & Rustendi (2024), who assert that job effectiveness contributes significantly to institutional performance, particularly in public service organizations.

CONCLUSION

This research was conducted to analyze the influence of four key dimensions of employee performance quality of performance, quantity of work, timeliness, and effectiveness on the overall performance of employees at Griya Waluya Hospital, Ponorogo. Based on the results of multiple linear regression analysis, it can be concluded that all four independent variables significantly affect employee performance.

Among them, quality of performance had the strongest influence, followed by timeliness, quantity of work, and effectiveness, respectively. These findings confirm that high performance is supported not only by the number of tasks completed but also by the precision, discipline, and optimal use of resources in task execution.

The model used in this study was statistically valid, as proven by the fulfillment of classical assumption tests, including normality, multicollinearity, and heteroscedasticity, indicating the robustness of the analysis. Based on the research findings, it is recommended that hospital management continuously evaluate and develop employee performance in all four dimensions. This can be achieved through: Regular training programs tailored to improve task precision, productivity, time management, and resource optimization.

Performance monitoring systems based on key performance indicators (KPIs) related to quality, quantity, timeliness, and effectiveness. Establishing a culture of professionalism that emphasizes accuracy, accountability, and continuous improvement. For future researchers, it is suggested to expand the study by incorporating other influencing variables such as motivation, leadership style, workload, and organizational culture to gain a more comprehensive understanding of employee performance determinants in hospital settings or other public service sectors.

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